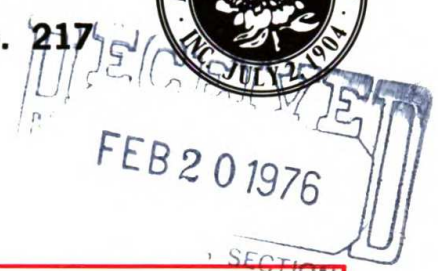


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American Peony Society Bulletin

MARCH, 1976

No. 217



KAMADA FUJI

Tree Peony. Large ruffled flower. Called the Wisteria of Kamada because of the unusual distribution of light lavender. Profuse bloomer. A Japanese origination.



PRINCESS

Tree Peony (Saunders - 1941) Dusky mauve with golden sheen - pale gold center.

MYSTERY

Tree Peony (Saunders - 1948) Large pearled lavender with darker shades varied with palest green.



*furnished
over printed by
J. Klehm & Son.*

WHEN WINTER COMES

Full dead; the night its sombre shadows casts;
Dour clouds spew forth their crystallized tears;
A sobbing wind, with doleful cries,
The thrashing arms of willow piles.

Frost-seared; the flotsam of the waning year,
In aimless eddies, drifts about;
While once proud flowers of the spring,
In tattered garments, stoop and cringe.

Soon hoary winter cloaks this grim tableau,
In fluffy, gossamer trousseaus;
With diamond jewelled gifts adorns
These silent lonely ones; forlorn.

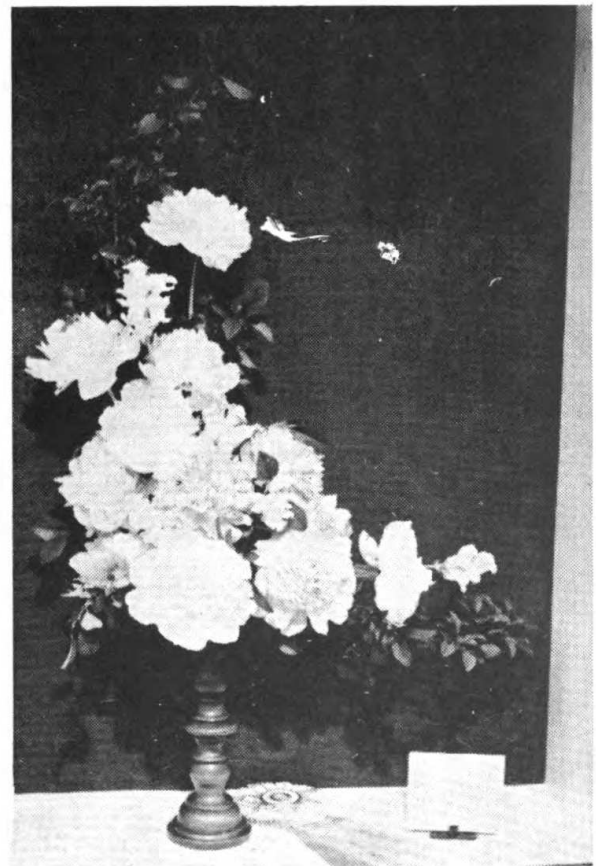
Thus dormant nature does its vigil keep;
And scans the wintry skies in hope,
To lift the sun-drenched chalice
To its lips again, and rebirth sip . . .

JULIAN L. JANUS

WHEN SPRING COMES



Artistic Designs — Invitational



Displayed Kingwood Center

AMERICAN PEONY SOCIETY

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DEPT. OF REGISTRATION

The department was formed to properly supervise the nomenclature of the different varieties and kinds of peonies. All new varieties should be registered to avoid duplication of names.
Greta M. Kessenich, Secretary

OBJECTIVES

The Articles of Incorporation state: Section (2) That the particular objects for which the corporation is to be formed are as follows; To increase the general interest in the cultivation and use of the Peony; to improve the methods of its cultivation and methods of placing it upon the market; to increase its use as a decorative flower; to bring about a more thorough understanding between those interested in its culture; to properly supervise the nomenclature of the different varieties and kinds of peonies; to stimulate the growing and introduction of improved seedlings and crosses of such flower; and to promote any kind of the general objects herein specified by holding or causing to be held exhibitions, and awarding or causing or procuring to be awarded, prizes therefor or in any other manner.

The AMERICAN PEONY SOCIETY BULLETIN is the official Society publication. It is mailed postpaid quarterly to all members in good standing.

MEMBERSHIP

The By-Laws state: All reputable persons, professional or amateur, who are interested in the Peony, its propagation, culture, sale and development are eligible for membership. Dues are as follows:

Single Annual	\$ 7.50	Junior of member family	2.50
Single Triennial	20.00	Junior non-member family	3.50
Family Annual	10.00	Life	150.00
Family Triennial	27.50	Commercial membership	25.00

Family membership, any two related members in same household — One Bulletin.

Junior membership, any age through completion of High School — Separate Bulletin.

For those who wish to further support the Society, the following special memberships are available.

Contributing	\$ 25.00	Supporting	\$100.00
Sustaining	50.00	Patron	250.00



AMERICAN Peony Society Bulletin



March 1976 — No. 217

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NATIONAL CONVENTION OF THE AMERICAN PEONY SOCIETY

JUNE 18, 19 and 20, 1976

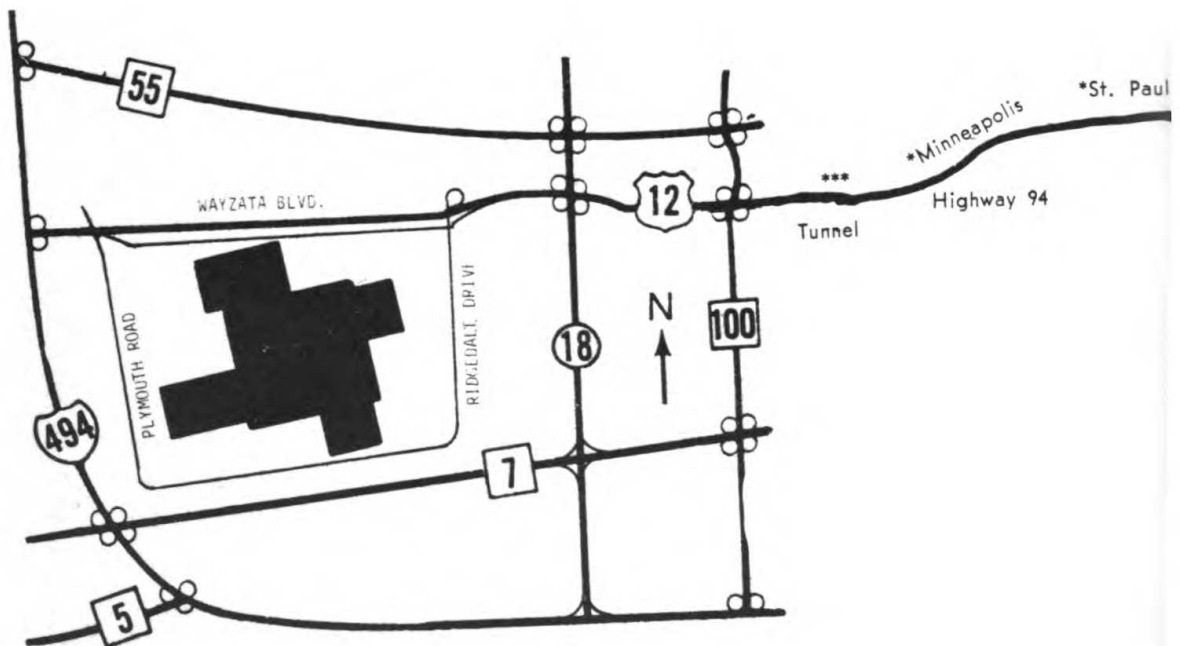
THE 73rd ANNUAL MEETING AND THE 71st NATIONAL EXHIBITION

Ridgedale Center — Minnetonka, Minnesota

8 miles west of Minneapolis on Hwy. 12

The permanent schedule of the American Peony Society will be published in the June Bulletin. For early reference, see March Bulletin #213.

Minnetonka, Minnesota Direct route to Ridgedale Center



From all points east, highway 94 is continuous to downtown Minneapolis, at that point highway 94 and 12 merge, going through the tunnel. On leaving the tunnel follow highway 12 west, a direct route 8 miles to Ridgedale. When approaching the center, turn right on RIDGEDALE DRIVE TO ENTER THE CENTER.

From the south, proceed on highway 100 to highway 12.



FROM YOUR PRESIDENT

The temperature here is -20. The snow cover is warm over the seedlings and new grass. Fortunately peony growing goes on in the winter for peony seed-growing buffs.

The first leaves appeared this week (Jan. 22nd.) on the seeds in the refrigerator. Rocks varieties with red tops, Ann Cousins, Arnold Arboretum, Rochester and Gratwick seeds.

About 100 were potted and put under lights. Others are still sending out the first root and being placed in the refrigerator.

A very pleasant surprise arrived in the mail last week from the Royal Horticultural Society of London England.

In honor of the American Bicentennial, they have awarded two hundred honorary fellowships of their Society to Presidents of the American Specialty Societies and to other distinguished American Horticulturists.

The American Peony Society was honored, and I have received the fellowship on your behalf. I have thanked them for this award.

I thought that this would be an opportune time to visit the Chelsea flower show, in London, May 25th. This is a major event of the Royal Horticultural Society. I will represent the American Peony Society and do my best to promote our favorite flower.

I hope to give an account of my visit and anything that I can find out about the state of the peony in England, at the Banquet meeting in Minneapolis, Minnesota, June 19th.

Hope to see you there.

John

— 5 —

Before the Bicentennial, THE PEONY

W. G. Sindt, Afton, Minnesota

The peony is one of the easiest to grow and hardiest of perennial flowers for the cooler areas of the world. The ancients ascribed great powers to this plant. Legend says it possessed the power to relieve headaches, cure convulsions, prevent nightmares and relieve obstructions from the livers. Planted by the doorsteps, it kept away evil spirits. A small piece of root worn around the neck preserved the wearer from all kinds of enchantments. It should never be dug in the daytime or a green woodpecker would peck out the eyes of the digger. So goes the legend.

When the word "peony" is mentioned, most people think of the full double type. This is but one of five types generally recognized. The double is, as the name describes, a fully double flower which may be up to eight or ten inches in diameter. The colors are red, white, or pink. The semi-double has stamens prominently showing. These stamens may be scattered among the petals or may appear as a cushion in the center with several rows of petals surrounding them. The stamens are always yellow and the petals may be red, pink, or white. The single has a single row of petals surrounding a cushion of yellow pollen bearing stamens in the center. The petals may be red, pink, or white but the center is always yellow. The Japanese peony has a center of staminoids, which are transformed stamens and nearly always devoid of pollen, surrounded by five or more petals. The petals may be red, pink, or white and the center may also be red, pink, or white. The color of the petals and staminoids may be in any combination. To clarify, singles always have a yellow center with pollen and Japanese have any colored center without pollen.

The peony plant is a hardy perennial which, after it is established, usually needs no winter cover even though temperatures drop to -20° or more. The snow cover is sufficient to carry it through the winter. Peonies need a cold dormant period and our Minnesota winters are much to their liking, so we are rewarded with some of the best peony bloom anywhere in the United States. The peony plants usually are 24-40 inches tall and bloom from late May to July.

In selecting peony varieties, one should give thought to the uses intended. Is it for landscape effect, for exhibition, or as cut flowers in arrangements? For the landscape a great deal of consideration should be given to the plant. The plant will be in the landscape all season and the flowers for only a couple of weeks. The foliage can be very fine or quite coarse, the color yellowish, bright green, or bronzy. Thought should be given to those varieties capable of holding their blooms up after the rain. To obtain varieties that meet these requirements, one should see them growing throughout

the season and not rely completely on a catalog.

To select varieties for exhibition, the only consideration is the bloom. It must have good enough form and size to go all the way to the top. It need not be a good plant, nor need it be very floriferous, and it is not for the average grower unless he is an exhibition "nut."

Cut flowers or arranging flowers should be the smaller doubles, singles, and Japanese. These will stay erect during a rain and be clean when cut. The smaller size is more adaptable to this use than the huge exhibition types.

Whatever type of peonies are selected, they should be planted in a sunny location. They thrive in any good garden soil, but heavy soil will produce better blooms than light or sandy soil. Good care should go into selecting the site since once planted they need not be moved for at least fifteen years. A three to five eye division should be planted for best results. Smaller divisions take longer to develop but make excellent plants. Old plants should be divided before re-planting. Peonies can be planted anytime before freeze-up, preferably about six weeks before the ground becomes frozen. I have broken through an inch of frozen crusts and successfully planted peonies. Peonies can probably be planted anytime the ground is not deeply frozen, but the degree of success and rapid establishment of the plant will vary. In Minnesota where my experience is, I prefer to plant in September but have planted them in June, July, August, September, October, November and December with good success.

Peony plants should be purchased from a specialist by variety name. It is preferable if they can be seen growing in the field during blooming season to see how the flowers stand up and also later in the summer to see the appearance of the plant. The specialty grower can also help you in your selection since he knows the characteristics of each variety. One spends several dollars each year for petunias which last only the one season, so \$10 or \$15 should not be considered out of reach for a peony plant which will last a lifetime.

Some varieties which we have enjoyed include: **Vivid Rose**, a very fragrant dark pink double; **Bonanza**, non-fading dark red double; **Kansas**, double light red exhibition; **Emma Klehm**, double dark pink; **Duluth**, pure white double; **Hansina Brand**, double light pink exhibition; **Krinkled White**, white single; **Pico**, white single; **Florence Bruss**, red single; **Seashell**, pink single; **Gay Paree**, pink Japanese; **Westerner**, pink Japanese; **Carrara**, white Japanese; **Vanity**, a blush Japanese with beautiful bright shiny green foliage; **Mrs. Livingston Farrand**, the most beautiful pink color but not a good grower; **Mrs. J. V. Edlund**, an excellent exhibition white double but too tall for any other purpose; **Walter Faxon**, a most reliable pink double; **Miss America**, which I think is the best semi-double white; **Mrs. F.D.R.** (Franklin D. Roosevelt) is a beautifully formed light

pink; **Kay Tischler**, a large pink Japanese. A few varieties that are new and expensive that I think are going to be real assets are **Douglas Brand**, a huge double dark red, **Myra McRae**, a double pink, and **Topeka Garnet**, a dark red single. These need distribution to see if they do well in all parts of the country.

Hybrid peonies have very brilliant colors and are mostly single or semi-double. **Red Charm**, a red double, is my choice if I could have only one peony. **Cytherea** is a peach-pink semi-double, **Coralie** a coral color much like **Cytherea** but single, **Red Red Rose** a bright red single, **Carina** a single with perhaps the truest red in peonies. **Camellia** is a small semi-double white that looks much like a camellia, **Prairie Moon** a semi-double pale yellow, **Gay Cavalier** a cherry pink which has been very reliable for me.

These are a few varieties that we like but there are many more just as good. Why not add a few more peonies for permanence?

PRESERVATION OF THE OLDER PEONY VARIETIES

*by David A. Ringle, Shawnee Mission, Kansas 66208
6539 Sagamore Road*

I would like to propose that members of the American Peony Society who are interested in promoting a systematic preservation of a selected number of the older peony varieties should organize themselves into a permanent subgroup of the Society devoted to this effort. Perhaps some of the Society's members would like to discuss this topic at the next National Convention in Minnetonka, Minnesota this coming June. It seems to me a worthwhile venture to assure the survival and availability of historically prominent named peony varieties, and there is no reason why such effort should not succeed if there are enough enthusiastic (and persistent) participants. In regard to the feasibility of preservation of older varieties, an exemplary effort of this kind has been made to preserve the older poultry varieties by an organization entitled the Society for Preservation of Poultry Antiquities (Box 717, Fort Dodge, Iowa 50501).

What has stimulated my interest in a systematic preservation of some of the classic peony varieties is that I am in the process of beginning another peony garden at a new rural home I am building approximately 30 miles from here. In looking over the lists of peonies currently available for purchase, I was again reminded of the apparent decrease both in the number of peony nurserymen as well as in the number of older peony varieties being offered for sale. I have had an intermittent interest in peonies beginning with my childhood in Wausau, Wisconsin where my father, Oscar L. Ringle, had as many as five acres devoted to the cultivation of herbaceous peonies in the early 1900's. Consequently, many peony variety names that come to my mind are among the older ones that my

father had in his much reduced plantings of the latter 1930's and early 1940's.

There are, of course, many problems that would be associated with any attempt to preserve or maintain stocks of a large number of peony varieties, including the problem of selecting which of the older (and even newer) varieties to retain. However, a reasonable list of candidates for preservation could be compiled by a committee set up for this purpose, with suggestions for this list provided by the Society membership. An additional problem would be the procurement and positive identification of the selected varieties. Probably the most difficult problem would be the establishment of the organizational mechanism for maintaining, and allowing access to, the peony varieties selected for preservation. One possible way to carry out this activity would be to divide the candidate check list into groups of 20 varieties per group, and to have volunteer trustees take on one or more of the groups with the understanding that each variety would be planted in duplicate and that periodically divisions would be made available to other American Peony Society members. Complete records of the locations of the various peonies would be maintained by the committee devoted to this project. Sale or other distribution of the divisions could be made directly by the individual trustees maintaining the group plantings or, perhaps, indirectly through the preservation committee of the Society. A percentage of the proceeds from the sale of the divisions should doubtlessly be acquired by the American Peony Society to help defray the costs of this project. Other possibilities would include the participation of interested peony nurserymen to handle some of the growing as well as the division distribution problems.

I would be glad to participate in a collective effort of this type. Perhaps some definite action can be initiated along the lines of establishing a committee for the purpose of preserving the older and historically important peony varieties at the next National Convention. If other members are interested in some sort of preservation project, it would be very useful to have their comments sent in for publication in later issues of the Am. Peony Society Bulletin.

In closing I would like to add that I have written this communication to the Bulletin at the suggestion of Don Hollingsworth whose enthusiasm for peonies has been an important factor in my current interest in the preservation of peony varieties.

"I have been intermittently interested in peonies over a number of years, beginning back in the 1930's in Wausau, Wisconsin. But I have moved around so often since leaving my home town that I have never had the chance to get a good established planting in place, although (in a kind of "Johnny Appleseed" fashion) I have a trail of peonies scattered between here and Connecticut. Professionally I am

a research scientist (a Ph.D. physiologist) which has been a major factor in my numerous moves. My best guess is that I will be staying at my new home nearby indefinitely, so that the new peony garden being established there should be as permanent as I am—and hopefully more permanent!” Quote from a letter to the Editor.

Paragraph from a letter received from Helen von Stein Zeppelin, W. Germany, January, 1976, regarding European varieties. (Editor)

“Thank you for your letter of Jan. 16th. I had hoped that you would make a check list of ALL the *Paeonia lactiflora* cultivars. This would really be a most important work. The very few people who know something about the old Peony cultivars are dead and I am afraid soon there will be nobody who really knows the different varieties. Some cultivars are in most nurseries of parental plants, like for example at the Wilds, of Sarcoxie, Mo. But what about the less well known cultivars. They will be lost. It would be wonderful if a Botanical Garden would try to collect these old varieties and create a kind of Historical collection like the Presby. Memorial Garden for the iris.”

(The check list, now being printed has peonies listed, which dates back and beyond 1904, with some of Lemoines, Calot, Crousse, etc.)

—Greta Kessenich

THE SECRET OF GOOD PEONIES — SOIL

Clarence O. Lienau, Detroit, Michigan

The first consideration given to growing peonies for pleasure, for exhibition or cut flowers is the soil.

From my years of experience, a good heavy clay loam is the ideal soil that will grow peonies you will enjoy. You will then have a permanent planting.

Planting in sandy soil, light or dark in color, I have found in three years time, roots will be infected with nematodes. Nematodes are one of the serious problems in growing peonies.

The usual symptoms are excessive thin stalks and small buds that sometimes fail to open. When digging the plant and excessive hair roots are found which have many small balls attached to the roots, that is nematodes. It is not worth while to try to save the average plant. Should you have a rare and expensive variety, you might try and save it by cutting off all the roots, leaving the crown with 1½ inches of heavy root. Replant these pieces in heavy soil. This has been done successfully.

To grow peonies in light or sandy soil, it is advisable to dig a hole as big as a bushel basket and as deep, for each peony root. Fill with clay loam (heavy top soil). Should you desire a long bed, dig a trench two feet wide and two feet deep and the desired length, then fill with heavy soil. This seems like a big project, but once it is done, you will have good peonies for the life of the plant.

— 10 —

MY GARDEN OF PEONIES

Mrs. Hertha Koehl

7016 Gerlingen - 2, Lerchenweg 3. Germany

Thank you very much for your letter from October 10. Enclosed you will find \$20. I am sure that I will enjoy the coming three years. Please send the Bulletins by normal mail, it is not very important how long it travels! My son is a member of the AIS and paid every year for air-mailing, but mostly the bulletins arrive by surface mail!

In short I will tell you the varieties we grow in our garden:

ALICE HARDING	MRS. EDWARD HARDING
ALSTEAD	MRS. G. F. HEMERIK
P. ANEMONAE FLORA	MRS. F. D. ROOSEVELT
ROSEA	NICK SHAYLOR
CHOCOLATE SOLDIER	RASHOOMON
EUGENIE VERDIER	RED ENSIGN
FANCY NANCY	TREE-PAEONIE RENKAKU
FESTIVA MAXIMA	
ISANI' GIDUI (better it should be this. It turned out as a tree-paeonie and I don't know the name, sorry)	
FIRE KING	ROSADA
GENE WILD	SARAH BERNHARDT
GOLDEN GLOW	P. with fernlike leaves, but not
HARI AI NIN	LADDIE
HIGH FASHION	SKYPILOT
HOLBEIN	SHIRLEY TEMPLE
JAN VAN LEEUWEN	TAMATE BOKU
KANSAS	P. TENUIFOLIA
KARL ROSENFELD	THE MIGHTY MO
TREE-PAEONIE KOKURYU	TOKIO
LADY ALEXANDER DUFF	TRULY YOURS
LA FRANCE	VISTA
MAI FLEURI	WESTERNER
MARTHA BULLOCH	WHITE PERFECTION
MLOKOSEWITSCHI	TREE PAEONIE YATSUKA
	JISHI

And about ten paeonies the name I don't know. I hope I will learn a lot!

The blooming time I can tell you from some of our paeonies, others did not bloom yet. CHOCOLATE SOLDIER bloomed on June 17—this year on 15 June. EUGENIE VERDIER looked not nice, it bloomed for the first time on June 26. GENE WILD I

bought in Germany in 1972 and it bloomed 1974 and 1975 with several stalks, wonderful.

GOLDEN GLOW I got in 1973 and bloomed 1974 and 1975 (June 6/7) with an exciting color. HARI AI NIN wonderful, middle of June. HOLBEIN is a German paeonie (Goos and Koehnemann 1910) Jap. single, light silken pink. It bloomed twice for us, very nice, but blooms don't last long. KANSAS, June 18/20. LA FRANCE I bought in 1974 and it bloomed on June 23 this year. I should say, this will be another favourite for me! MAI FLEURI bloomed in the first year too, the coloring is indeed "coffee au lait"! Very nice. It is early: May 25. MARTHA BULLOCH (bought in 1972) is lazy, it had the first bad flower in 1974. MLOKOSE-WITCHI made wonderful interesting leaves but failed to bloom. MRS. EDWARD HARDING is here since 1972 and bloomed every following year. MRS. G. F. HEMERIK, Jap. type, early too (June 25) and has wonderful flowers, really "Shocking-pink."

ROSADA is also a favorite for me! It had 4 stalks with several flowers in the very first year. SARAH BERNHARDT bloomed once, but wonderful—since 1972. SHIRLEY TEMPLE bloomed once, but wonderful, since 1972. SHIRLEY TEMPLE bloomed June 15. and TAMATE BOKU on July 3. TOKIO is a sure (or certain?) bloomer for me. VISTA bloomed once on June 22. WHITE PERFECTION is also wonderful, early on June 15. YATSUKA JISHI is here since 1972 and we had huge flowers in 1974 and 1975.

Occasionally we read in the descriptions of peonies the adjectives describing a certain peony or variety as "Lazy" and "Stingy." In the coming check list that is now being printed, those words are sometimes used, as is also noted in the letter from Germany.

Mr. William Krekler has defined their meaning. Both words describe the flower habits. "Lazy" indicates that the stem is weak and does not hold the flower upright, especially when rainsoaked. Flowers want to lie down and have mud faces!

"Stingy" indicates that yearly the same plants produce only a few flowers. The strength goes into a few buds, making very large and beautiful flowers.

—EDITOR

IN MEMORIUM

Ray B. Hallen

Ray B. Hallen of Northbrook, Illinois passed away Oct. 7, 1975. He was a native of Sweden. He is survived by his wife, three sons and six grandchildren. He has been a member of the American Peony Society for many years as well as an active member of the Fifth District.

A PLACE FOR PEONIES

by Anthony J. De Blasi, Sanbornville, New Hampshire

"Whether in favor or in humiliation, be not dismayed. Let your eyes look at the flowers blooming and falling in your courtyard. Whether you leave or retain your position, take no care. Let your mind wander with the clouds folding and unfolding beyond the horizon."
—Old Chinese epigram.

When, among the flowers of your "courtyard," you number the peonies, you add an extra measure of insurance against the waywardness of fortune. Their surpassing charms, endearing fidelity, and gentle disposition are easy rewards for the discerning gardener. And, in such troubled times as these—in which the world appears to be writhing in pain from the stings of a swarming insanity—what a resonant note of serenity they bring!

The need is clear to make provision for a place in everyone's "courtyard" where he can catch his breath and restore his sense of balance and faith in nature—where his ties with earth and heaven become visible—where he can find the time to disentangle some knot or puzzle—where he can indulge himself in the unselfconscious pleasure of enjoying a beautiful plant.

According to legend, Apollo used the peony to cure the wounds of the gods. (The name Peony derives from Paion, an epithet of Apollo.) Any flower that can find such an important role in legend must have been deemed special to deserve such favor. And it is special. Its beauty is legendary. Sturdy, adaptable, reliable, it laughs at both neglect and pampering. Be kind to yourself. Choose the peony for your special retreat. Make it a garden of peonies, if you can, allowing your imagination full sway. Well planted and well placed, the peony transforms the place in which it is set to "a little bit of heaven," a spot that you will visit with a special feeling and—when your peonies bloom—a sense of intense delight.

Do not be persuaded into believing that the creation of a special place for peonies is either an idle luxury or a kind of escape from reality. Judgments such as these are usually made by individuals whose ideas of what is important are locked in orbit around the dollar sign and whose sense of reality lies entirely within the shadow cast by their nose. Heed instead the inner call to an appreciation of beauty, in its varied manifestations, which beckons to a reality undreamed of by the too casual observer.

Go out and enjoy your peonies! Gather unto yourself their many gifts! What luxury to the senses!—what balm to the nerves!—what food for the spirit and for encompassing thought!—what inspiration to let the mind wander with the clouds for a few expanding moments of peace!—what cause to be thankful that we live in a world where a peony can spring forth from the earth and proclaim, in gorgeous banners and perfumes, its allegiance to the Divine—right in our presence!

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MEMORIAL CHAPEL AT KLEHM NURSERY

This summer I visited the Klehm nursery and sales center in Arlington Heights after an absence of about two years due to a series of circumstances that kept me close to home.

I was looking for Lois (Mrs. Klehm) when one of the salespersons suggested that I try the Chapel. I inquired as to where it was located and was informed that it was right next to the Pink Peony.

The Pink Peony is the name of the old Klehm home which was used as the office and then became an antique and doll store. It is adjacent to the sales complex.

In wandering around the sales complex I came to the area mentioned. The bonsai sales yard had been moved farther east and the adjoining unusual plant yard had been expanded and moved more to the east. In the space right next to the Pink Peony was an exquisite rustic A-frame building. Massive timbers formed the frame and rustic siding enclosed the space under them. I entered and found myself in a beautiful chapel, small in size with benches for about 24 people, a lobby had four beautiful matched dioramas depicting significant events from the Bible. The interior was all finished in the same rustic, weathered wood as the exterior.

There was a peace and quiet inside that took the spirit and mind away from the outside world. The dedication to Carl Klehm was simple. The atmosphere certainly reflected the character of Carl. Strong with simplicity and honesty and an abiding faith. It was a tribute from his family and reflected their virtues as well.

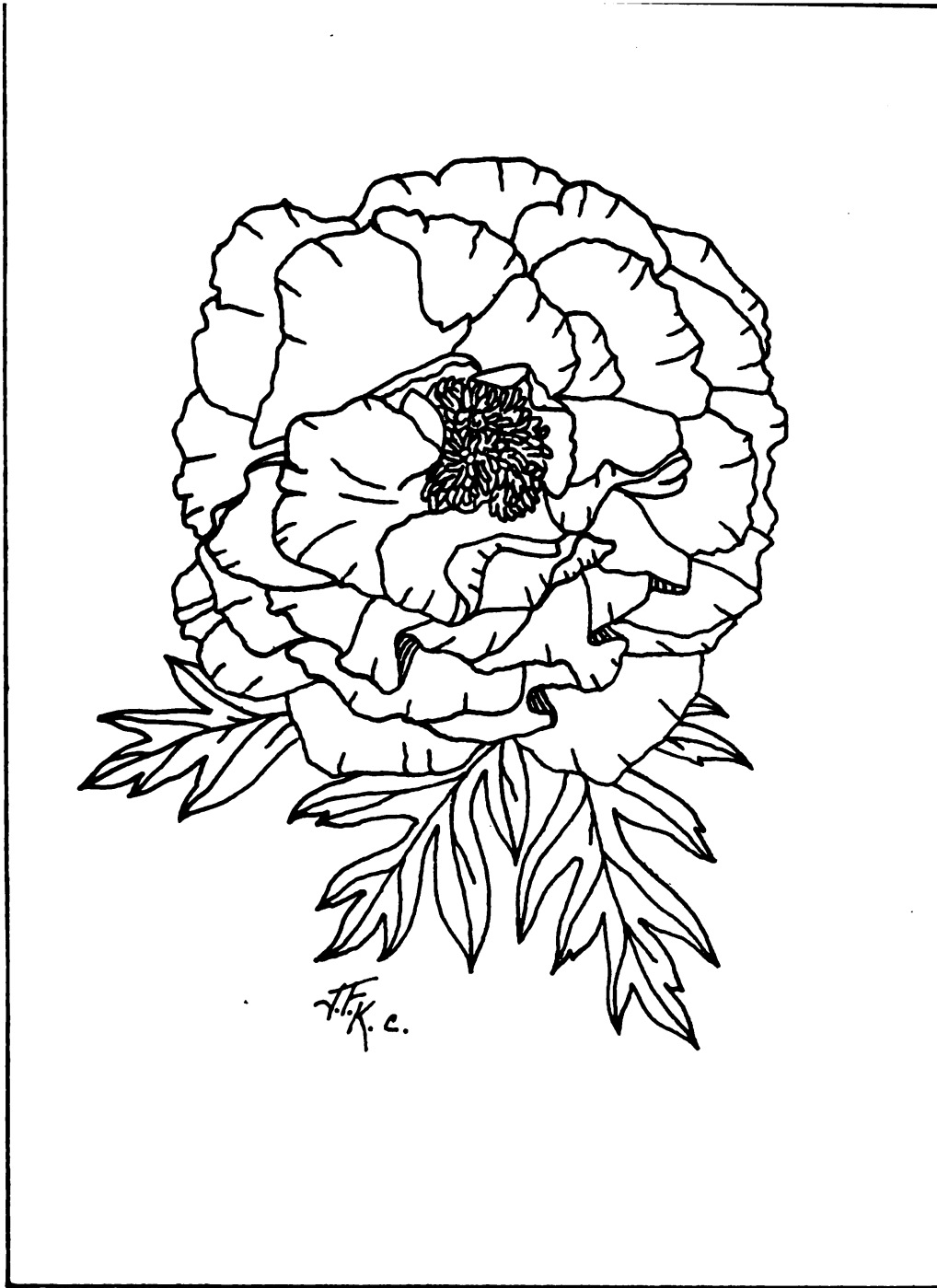
Surrounding the lovely chapel is a garden. It has been planted with rare plants which were always of interest to Carl and with a collection of the fine peonies he had helped to create. It is another memorial to one of America's great plantmen.

Most people knew Carl as a cheerful, wise, and friendly person. Not many knew of his great work in the many aspects of horticulture and as a community, and civic leader, and a pillar of his church. Carl's untimely death was a serious loss to his family and community.

The chapel and its garden are a wonderful memorial to a great man. It brings the spiritual qualities of the garden and church together in a perfect harmony. As the poets have said, "We are nearer God in a garden than anywhere else on earth" and here the chapel has created the perfect setting and reminds us that God and nature and man are all one.

—Eldred E. Green
Horticulturist. Chicago, Illinois

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AGE OF GOLD

At one time the color range of tree paeonies was confined to white, pink, red and lilac; a yellow variety was not known but desired. Tutea tree peony "Age of Gold" (by Saunders) is a very fine yellow. Flat rosette of soft cream gold. Like a ruffled camellia flower. Each petal has a small red flare at its base. Blooms are produced well above the attractive foliage. With each season this variety tends to produce many stems from the ground and becomes wider.

*Joseph F. Kuczek
of Klehms*

TREE PEONY TOPICS

Louis Smirnow, Brookville, New York

Tree peonies afford one a long blooming period. When carefully selected, Japanese and Lutea plantings enjoy continuous bloom over an extended period. In our garden they regularly start to bloom between May 15 and 20. Luteas come into bloom a week or two after the Japanese and European varieties, starting a week before Memorial Day and extending into June 5 to 10.

The Japanese and European types flower with lilacs, early irises and magnolias. The garden companions of the Lutea are irises, early roses and late narcissus.

Most Japanese varieties achieve a height of 3 to 4 feet and are 3 feet in breadth. Japanese varieties bear flowers in unbelievable profusion, a mature plant sometimes yielding as many as 100 blooms in a single season, while Lutea hybrids bloom freely, they do not have as many blooms as the Japanese.

Luteas reflect a wide range in height, many running a little shorter than the Japanese or European but a few varieties grow as tall or taller. Anything from 2 to 4 feet can be considered typical with many of the Luteas, not exceeding 3 feet.

Size of the flowers vary—Japanese varieties are normally 8-10 inches in diameter and on rare occasions 14 inches. Most Luteas bear flowers up to 9 inches.

The blooms of the Japanese are offset by the plants' rich foliage which offers them lush green complement. In the autumn, the leaves turn slowly to vivid scarlets, corals and bronzes; only with the arrival of winter does the rich display fade and disappear. Luteas boast a range and array of both flowers and foliage not matched in either of the two groups. Luteas are widely known for their wonderful fragrance.

Growing tree peonies from seed is a rewarding effort. The excitement of seeing a bloom from a plant raised from seed is worth the long wait. Tree peonies take five to six years to bloom from seed. Plant some every year and in a few years you will enjoy the thrill of new blooms every year. You may be fortunate enough to introduce new varieties superior to those now available.

ALL THE FLOWERS OF
ALL THE TOMORROWS
ARE IN THE SEEDS OF TODAY—

* * * * *

In her book, "The Peony" Mrs. Edward Harding says: "I know of no plant that is so satisfyingly beautiful in every stage of its development. . . . When the blossoms appear it is indeed hard to leave the garden; no matter how many times a day one gazes at them, there is something newly entrancing on each successive glance.

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PEONY DAY, The Fifth District

Greta M. Kessenich, Hopkins, Minnesota

Peony people from the midwest were there from far and near. They came long distances; it was the meeting of the fifth district.

It was a beautiful early morning when I left Minneapolis, this 9th day of November, on North West airlines for Chicago. Messrs. Clarence Lienau and Irvin Ewing came from Detroit, Michigan. Since our flights arrived at O'Hare airport one hour apart, Mr. Roy Klehm met the three of us and we were on our way to the dinner meeting at Antioch, Illinois, 40 miles distant, stopping enroute for Messrs. Bob Rose and Joe Kuczek.

The large U shaped table in the banquet room was inviting and lovely. Bordering the inside edge of the table were pots of the green and white striped leaf spider plant, which were given to all those attending the meeting. All the ladies wore a corsage made of beautiful chrysanthemums. Both gifts from the Klehm Nursery.

After a most delicious dinner, the business meeting was conducted. The Secretary read the minutes of the 1974 meeting and more important to the men present, were the lines saying that the date for this annual affair and meeting should always be the week-end that did not interfere with the beginning of hunting season.

I understand that nothing interferes with that sport. Peony planting and all garden work is stopped.

Mr. and Mrs. Bob Rose were elected President and Secretary for the coming year. A vote of thanks was extended to Dee and Delia Garrison for their competent work and successful management of the office of the fifth district.

Mr. Marvin Karrels of Milwaukee, Wisconsin gave a talk on peonies that he observed at the National Exhibition, appearing on the show tables for the first time. His descriptions of the peonies and evaluation were most interesting.

Auction of peony roots are comparable to an auction of rare china and antique glass. Every person anxiously awaiting for a variety that is not in their garden, a variety that is rare, hard to get and one must search to find. It may come up at an auction. It did here. Bidding was fast, exciting. Price was of no consideration.

Artist Joe Kuczek presented the 5th district with one of his beautiful peony drawings for the auction. The bidding was so lively, so interesting that our talented auctioneer, Joe Glocka had only to hold the picture and say very few words, ending with sold!

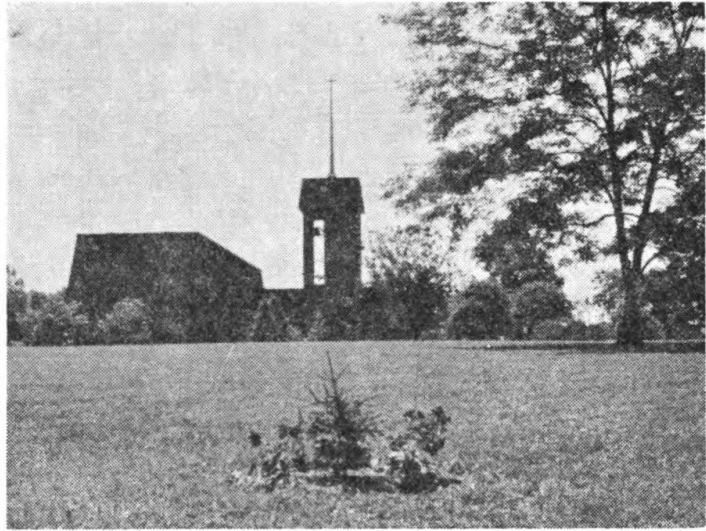
The weather in November is quite unpredictable. The day that was so beautiful when leaving, had turned very cold. Rain and snow greeted me on my arrival back in Minneapolis late that night.

For all present, I know these meetings are "moments filled with joy and pleasure, cherished memories to treasure."

NEW DISPLAY GARDEN

Harris Olson

1141 Maryland
Birmingham, Mich.



Three long beds with one hundred twenty-eight named varieties of tree and herbaceous peonies have been planted to add to the beauty of the grounds at the Congregational Church of Birmingham.

How did this come about?

Ten years ago the church relocated to a nine-acre site just north of town. Upon completion of the new church building, only limited funds were available for a landscape plan.

The men's fellowship sold fertilizer to raise funds for the cause. Trees and shrubs were sold as living memorials.

Many of the original large trees and plantings on the old estate could be kept, and the landscaper showed exceptional skill in adding fine material. The results were evident when we received an award from the Michigan Horticultural Society.

There were a few spots that could be further developed, and about four years ago I started a hemerocallis bed. There are now over four hundred named and labeled varieties plus many seedlings. For this we received another award from Michigan Horticultural Society. We also have beds with twenty to forty varieties of **Hosta**, **Spuria Iris** and **Jap Iris**.

In searching for another flower to develop, I hit upon peonies, because they are long lived and need little care. They are ideal for church plantings. I joined the National Society and did considerable reading.

Clarence Lienau, a genuine expert on growing peonies, lives in the area, and I enlisted his help to get the beds going. We put on a show of individual blooms one Sunday morning in June between church services. Members and friends were encouraged to support the budding project by making a donation for their favorites. Sufficient monies were collected to start the project. The following November saw many plants in the ground.

The site was selected for its excellent soil, drainage, and easy viewing. The choice of plant material has representatives of vir-

tually all types of peonies. Labels listing name and other pertinent information accompany each variety.

About sixty percent of those planted last fall bloomed this spring and everyone was delighted. Additional peonies were planted this past fall.

The largest bed has fifty-four tree peonies which should be very exciting in a few years. The other two beds contain seventy-four varieties of herbaceous peonies.

My sincere thanks go to Clarence Lienau, Louis Smirnow, Dr. David Reath and Brother Charles for their fine plants and instructions.

The church makes an ideal location for a display garden, because it is open all the time and easy to locate. We are not a Kingwood Center but do have continuous bloom from early spring bulbs to mums in the fall. The church is located at One Thousand Cranbrook Road, the corner of Cranbrook and Woodward in Bloomfield Hills.

Everyone is invited to come and enjoy the viewing splendor with us.

* * * * *

Botrytis, and other similar blights sometimes attack peonies. All parts of the plant may be affected. As the prevention and cure for all of them is the same, little distinction will be made here between them. In early spring, the new shoots may suddenly turn black and die. The buds may turn brown and turn to a powdery dust. The infection may spread downward on the stem and cause it to die. It may extend down into the roots. Spores from these infected parts are carried by ants, or other insects, and the winds to other plants. They also are carried over winter in the plant debris left lying around. Soon after growth starts, the stems may develop oblong brown spots on them which are called Peony Measles. Leaves may develop spots on them, usually soon after blooming, which spread and may kill the leaf. The leaf area is reduced and the plant damaged. Damp weather and poor air circulation tend to increase these infections.

Sometimes a fungus attacks the stems after blooming season, especially those that have been cut. Nothing much is known about it, but proper spraying with a fungicide may help. The infected stems should be cut and burned at once.

Start a spraying program at an early date. When eyes begin to show, start to spray. Botrytis occurs more often in cool wet weather. Benlate or Bordeaux mixture has been used and does give a considerable degree of control.

WHAT IS YOUR OPINION

"What's your opinion of the tree peonies?" This was the question that I asked Mr. Napier and later Bill Christmas. The time was in the late 1930's.

Mr. Napier had a group of about 20 varieties in his fabulous garden. Bill Christmas has a collection of seedlings at his Northbrook Gardens.

Mr. Napier looked over his plants and observed that tree peonies were spectacular but speculative. While there were always flower buds and good growth and a few flowers on the lower parts of the plants, there was usually a great loss of the upper flower buds because of late frost or cold weather. He felt that about one year in ten was really satisfactory from a bloom standpoint.

The Napier garden included most of the French hybrids such as **Souv. de Ducher** and the recent **Souv. de Maxine Cornu**.

Bill Christmas gave a slightly different viewpoint. He felt that the large double hybrids were more prone to late spring damage than the seedlings of fewer petals. He had a planting of seedlings from a Japanese source and felt that results were satisfactory.

My own experience has been limited to a few of the French hybrids and observation and conversation with a number of people who have grown some.

As a result there are a number of questions that have been floating around in my mind for time.

1. What are the limits of hardiness (actual frost resistance) of the various groups of tree peonies such as Japanese singles, French hybrids, and the more recent yellow species? Dr. Reath indicates that all tree peonies are not hardy in his northern area. He grows his essentially as herbaceous ones.

2. Does the blooming time (early or late) have much effect on the performance of each of the major groups? Much of the trouble with the French hybrids may be due to an extreme earliness that is not present to such an extreme degree in singles.

3. What protection would be helpful in extending the range of satisfactory performance? Rose growers accept the need for winter protection of most hybrid tea varieties. Rose cones help keep sun and wind off which prevents most of the winter problems. Would similar measures be suitable for tree peonies?

4. Is a rating system for tree peony hardiness a solution? Some plant societies have ratings where hardiness is a factor in growing a wide range of varieties. Rhododendrons are one example. They are rated by resistance to low temperatures.

5. Would a rating for earliness or lateness for tree peonies be useful? Later varieties prove more satisfactory than early ones in the Chicago area.

Tree peonies are some of the most spectacular plants grown when in full bloom and of a reasonable size. Their use ought to be greatly extended if some of the problems can be overcome. Perhaps more input by members who are growing these plants can answer my questions. In short, what has been your experience in regard to the above questions?

—*Eldred E. Green, Horticulturist
Chicago, Illinois*

THE EYES DON'T ALWAYS HAVE IT

Myron D. Bigger, Topeka, Kansas

The peony trade has for many years sold the public a three to five eye division of a peony plant. This has been considered the correct division to purchase, the correct division to plant and the correct division that will give the buyer the best plant in the producing of flowers.

Being in the peony business, these many years, experience in planting, growing and observing has proven to me that a standard division is one of size or one with large strong roots. The volume of the root makes for a good start better than if it had a certain number of eyes, on a small root.

I have observed that during the peony planting season, some of the dime stores do sell beautifully boxed peony roots, colorful pictures on the outside which is most inviting for the public to purchase. A minimum price, with colors red, white and pink.

I purchased one of these boxes one day, took it home and found one small root about the size of my thumb and about three inches long. Yes, it was a three to five eye division. Now a large rooted division with one eye would be far better and in three years would make a good strong plant.

Some varieties do not make as many eyes as others. WESTERNER is inclined to make large roots with a few large eyes while SHAWNEE CHIEF will have many eyes. KANSAS will have numerous eyes and if the plant is left in the ground it seems to have a few strong eyes that will rob the others and grow. When divided, any large or small eye will grow and make good plants.

A standard division with three to five eyes will make a fine plant, if the root is strong and healthy but a large one eye root is far better than a small undersized division with any number of eyes.

So for me, the eyes do not always have it!

KLEHMS BUY KREKLER'S PEONIES

The family nursery (2 East Algonquin Road, Arlington Heights, Illinois 60005) will transplant all of William H. Krekler's famous peony collection to their Champaign, Illinois Peony nursery. Mr. Krekler will continue hybridizing as long as able.

POTTING FOR SPRING SALES

Clarence O. Lienau, Detroit, Michigan

Some years ago, I had some peony divisions left over after planting, late in November. It was then I decided to pot up the remainder, for sales in the spring.

All the divisions were heeled in a trench, three inches in depth. All were tagged with a tree label and a marked stake was placed between each variety. When the frost was out of the ground, in mid April, the divisions were dug and the potting project was underway.

The only pots available in those days were the heavy tar paper variety. We now have thin, green plastic pots that will not rot. Each division was planted in a nine inch tar paper pot, the tree label was removed from the divisions and then pushed into the soil against the side of the pot for insurance, as the name of the variety had been written on a garden stake, with color and price.

The potted divisions were then put in a large trench, deep enough so the pot was level with the ground surface, which permitted the soil to maintain the proper moisture.

10% of the potted plants bloomed the first year, depending on the variety. **Mrs. Franklin D. Roosevelt, Mons Jules Elie, Red Charm**, etc., are easy to open. Japs and singles nearly always bloom.

When planting one of these potted plants, the plastic pot must be cut completely around, down one side, across the bottom, then up the other side with a short bladed knife. Potted peonies can be planted any time of the season; however it is advisable to water, then cultivate when the soil is dry enough, every week or ten days for best results.

REGISTRATION

PINK PARFAIT. (Charles Klehm & Son) (71D) Dec. 15, 1975 Parentage. Mons. Jules Elie x Mons. Jules Seedling # 71D. Beautifully formed large vibrant pink flowering double peony, of the lactiflora species. It is mildly fragrant, late seasoned, relatively tall, 33". A robust grower. No stamens or pollen. It has silver petalled edges reminiscent of the Klehm line of breeding which resulted in "innerplate" and "Jay Cee." Disease resistant.

NEWSLETTER: PAEONIA

Editors: The Lanings

Summarized by Bill Seidl

SEPTEMBER 1975, Vol. 6, No. 3.

The woody cuttings of his Itoh hybrids had failed to root, reports Father Syrový in a follow-up article written March 7, 1975. He intends to try again by inducing callus on the stem in July before taking cuttings in the fall. Father also got the idea that these Itoh buds, having quite woody stems beneath the buds, could be grafted onto roots of other herbaceous or tree peonies.

Three seedlings of Roy Pehrson's growing in Chris's Garden are described by Chris. One is a true salmon, single, from SHAYLORS SUNBURST x LITTLE RED. A second is a "phony Itoh" (false hybrid from an Itoh cross), a peach-pink single with typical lobata roots. The third is Roy's "Best Yellow," semi-double, large, of very good substance, with later-opening side blooms, which sets seed easily.

Mark Laning and his wife Sally, while living in Redlands, California, searched for the species *P. californica* in native natural stands. Locally it was called "bachelor buttons." Although difficult to locate, some patches were found in the Redlands area. They also viewed the plants in the Santa Barbara Botanical Gardens where Dr. Dara Emery met them and told them of other natural stands in the area, which the Lanings found. A photographic study was made of the plants in the Redlands area for a period of 5-6 months beginning in mid-December. These plants eventually grew two feet tall; in the milder moist coastal climate of the Santa Barbara area the plants grew to three feet with larger flowers and an earlier growth period. The Lanings have since returned to Michigan but while in California they sent pollen to their dad, Chris, to use in Michigan for pollinating other peonies there.

In a second article, Mark tells of his and Sally's successful attempts to capture the natural beauty of *P. californica* by encasing the flower specimens in cubes of polyester resin. With some professional help, they found the best method to dry the flowers before adding liquid resin, in successive layers, to the mold containing the dried flower. After curing, the cube is removed from the mold, sanded three to four times, and buffed. A clear cube of plastic results with the flower beautifully and naturally displayed.

In 1974 some of Roy Pehrson's Itoh hybrids bloomed for the first time, and all but one had tiny narrow petals or no petals at all. This he blamed on late-freeze damage to developing buds. However the same crippled and disfigured bloom occurred this year—and there was no late freeze to catch the blame. These flowers were all lilac or dark red in color, no yellows. The only normal flowers, three in number, occurred on a seedling of PETITE RENE x THUNDER-

BOLT and it had plentiful pollen, enough to pollinate about 60 lacti blossoms. Two others appeared to have some pollen. Of 13 seedlings with rudimentary petals, one produced three nearly-good seeds, a hopeful indication that viable seed may result from a mature, established plant.

“Negative” was Don Hollingsworth’s conclusion regarding three experiments: (1) making the Itoh cross under high temperatures, using clear plastic bags over pollinated flowerheads in 1974, (2) injecting pollen directly into the carpels or ovarian cavity, and (3) pollinating the wound or stump left upon removal of the style. The latter two experiments were conducted in 1975. Also in ’75, Itoh pollinations were again made under high temperatures, this time naturally attained. Seed production (D105 was one pollen parent used) seems promising but conclusions are being withheld until the seeds germinate. Problems with technique, equipment, and inexperience limited Don’s experiments with pollen testing but he does report some results in general terms. The best lutea hybrid pollen evaluated was that of D105 (Daphnis cross: AMBER MOON x F 2 A). “Quite good” was the rating given D106, a sibling. D63 (F 2 B x CHONI), a clear pink, was almost as good as D105. Pollen samples from two plants of CYTHEREA gave no germination and “quite a few” respectively. Unexpected low germination occurred in pollen of CARDINAL’S ROBE and MOONRISE. These two had always been viewed as satisfactory pollinators and so will be tested again.

A medical emergency and hospitalization allowed Roy Pehrson only a ten-minute look at his garden on May 19, a good yellow Mloko, from Sam Wissing seed, was in a bloom, as was a true hybrid from LAURA DESSERT x EMODI-MLOKO, a bright red-purple, fertile, with “very different” foliage. In mid-June, Roy noted a loose double of glorious scarlet color from MIKADO x GOOD CHEER.

The breeding potential of MOONRISE is analyzed by Roy. Altho MOONRISE is derived from the Saunders lobata hybrids, Roy believes the lobata red gene has dropped out from the MOONRISE chromosomes. Even the finer, more divided foliage of lobata does not appear in the seedlings. PAULA FAY, MAY DELIGHT, and several others should be used to realize the desired lobata traits.

More vigorous and later-blooming tree peonies are being sought by Don Hollingsworth. He received several recommendations from Leo Armatys and also some from Harry Kuesel. Harry moved from Long Island, New York to near Denver, Colorado and transplanted his peonies the fall of 1972. The lutea hybrids have recovered faster than the Japanese types, AGE OF GOLD leading the way. The Japanese types are less vigorous, FAIRY TALE doing the best. Others that have bloomed at least once are BLACK

SEA, STOLEN HEAVEN, ORIHIME, and HANA DAIGIN. Five others may not even bloom in '76.

Studying the Saunders' Notebooks, Roy Pehrson notes **KELWAY'S GLORIOUS** proved to be a valuable parent. From 25 seedlings of **K. G. x LOBATA** (Perry), four were named. In his own lacti-lobata seedlings, Roy observes many dissimilarities to the Saunderson's ones and wonders if possibly lobata (Perry) was not a lobata at all but some unknown "LITTLE RED." Of the **LITTLE REDS**, Roy believes **GOOD CHEER** far superior (for breeding purposes) to **LADYBIRD**, **LITTLE DORRIT** (dwarfish, slow to develop), **SCARLET TANAGER**, and the **LITTLE REDS F2's**. Roy commends Don Hollingsworth's proposed breeding program beginning with lacti x **RED RED ROSE** and describes his cross of **BATTLE FLAG x RED RED ROSE**. Thirty plants resulted and appeared to be pure lactiflora. Two produced red seed pods and, along with the open-pollinated seeds, were sent to Chris Laning. The seeds were planted and Chris reports one of these seedlings (two years old) had red foliage. Roy conjectures that entirely new traits, such as the red pods and the red foliage, may appear in seedlings through an unusual combination of genes. These new traits may not necessarily be desirable. Multicarpus appears when genes of lacti are combined with those of *anomala*, *emodi*, and related species. Abortive petalage has appeared in his own lacti-delavayi hybrid Itoh crosses. Extreme susceptibility to "leaf spot" fungus has also appeared in about 50% of these seedlings.

Some of his best herbaceous hybrids are described by Don Hollingsworth. **MISS AMERICA x GOOD CHEER**: a multi-petalled single creamy-pink similar to **LOVELY ROSE**; three siblings are also lovely pinks of a cooler tone. **SWORD DANCE x GOOD CHEER**: orangest, sharpest red, single. **KARL ROSENFELD x GOOD CHEER**: a fine red, semi-double. **DAWN PINK x ECHO**: a lovely soft pink anemone with extraordinary substance. **KICKAPOO x RED RED ROSE**: a handsome clear red, semi-double.

Don selected some statements of interest to hybridizers from the 1968-69 catalog of the J. Franklin Styer Nurseries, specialists in supplying cutflowers from their farms in Virginia, Pennsylvania, and New York. It seems that French and English introductions of the 1800's provide better cutflowers, in general, than new American varieties. This is attributed to similarity of soils and climate (hot humid summers, frequent mild winters) of the Eastern seaboard to those of the European hybridizers. In response to Don's inquiry about what qualities to seek and what lacti varieties to use in breeding, Mr. Styer recommended **VENUS** (Kelway). Altho a good double, it sets seed occasionally. With thousands of plants available in the nurseries, enough seedlings were obtained to allow eventual

selection of 30 to 40 worthy varieties. Several whites had superior substance; in general they open well and are bomb type; some are big full rose type. Cutflower qualities to seek: (1) free, quick opening—meaning bomb type, (2) consistent fair size, (3) long stem, 22 inches or better still, 28 inches. (4) single color, (5) straight stem; RED CHARM is crooked; (6) strong petal attachment; loose petals in a box make wholesalers scream; FELIX CROUSSE and M. JULES ELIE are standards to follow; (7) bud must show exact color of open flower. My Styer also mentioned they have two sports of M. JULES ELIE, ANN STYER, pure white, and LINDA, blush, that are otherwise identical to M. J. E. They revert at the rate of 2% in any row. He also says double hybrids, such as DIANA PARKS, are much in demand but they increase too slowly. Good pink and white double hybrids would be desirable.

The earlier herbaceous hybrids generally have too much pollen for show and florist application and propagate too slowly, hence the need to search for superior double lactifloras to use as seed parents. Don explores this subject, noting that *P. OFFICINALIS RUBRA PLENA* is about the only other source of doubleness. He recalls that Roy Pehrson has a Japanese-flowered seedling from ARCH-ANGEL x NANCY, a loose double probably out of QUAD F2, a double from MIKADO x GOOD CHEER, and of course his double LULLABY from MOON OF NIPPON x LAURA MAGNUSON. Prof. Saunders has recommended JAMES KELWAY and LADY ALEXANDRA DUFF. Don asked other growers for recommendations. Roy Klehm advises CHARLIE'S WHITE as a seed parent, BOWL OF CREAM as a strong pollinator. Allen Wild said JAN VANLEEUEWEN, Mr. Bigger mentioned BIG BEN, CARRARA, JAYHAWKER, SNOW MOUNTAIN, WESTERNER, MME. DE VERNEVILLE, CHARM, PRIMEVERE, RADIANT RED, FESTIVA MAXIMA, and MARIE CROUSSE; he also said ANN COUSINS was bred from PRIMEVERE x LA LORRAINE. Secondary stems, forced to grow by pruning the emerging primary stems, produced less double flowers with better carpels for Don on plants of KARL ROSENFELD, CAROLINE MOON, and BIG BEN. MISS AMERICA produced such secondary stems without pruning. KELWAY'S GLRIOUS sets some seed but the carpels often rupture and the exposed seeds then develop poorly. This tends to happen also on BIG BEN and MISS AMERICA. Ed Michau reports side buds of F. MAXIMA sometimes have carpels, his oldest Itoh hybrid being from such a side bud. From *Peonies* (James Boyd, ed. 1928) Don passes on the information that John Richardson (1798-1887) bred many choice peonies in a very small bed of seedlings, about 12 by 18 feet, by using only the occasional seeds produced from double parents. At one time, five of his originations were rated 8.0 or better in the APS symposia, one of these being WALTER FAXON.

MIDWEST PEONY SHOW

**Chicago Horticultural Society and Botanic Garden,
Glencoe, Ill. — June 5-6**

The midwest peony show will be held at the Chicago Horticultural Society and Botanic Garden. Peonies will be exhibited as part of the formal dedication of the Horticultural Building.

This early date, June 5-6 will be welcome to those exhibitors that have tree peonies and the hybrids. The following schedule will meet the requirements for the show. Depending on the spring season, we are hopeful of seeing the early lactiflora on the show table, also.

The Botanic Garden is located at 775 Dundee Road at Edens Expressway, U. S. 94, in Glencoe, Ill.

RULES FOR SPECIMEN EXHIBITS

1. All entries must be completed and in place by 11:30 A.M. on opening day.
2. All entries must have been grown by exhibitors.
3. Entry tags supplied by the Society must be filled out completely as to class, variety, and name and address of exhibitor. In addition, each variety must be identified with a small wood or plastic tag with the variety name legibly printed thereon. The exhibitor or his agent shall be responsible for proper completion of the entry tags.
4. Stems should be approximately 14" long.
5. Exhibitors are limited to one entry each in classes A, B, C, 50. Up to three entries are permitted in all other classes provided they are different varieties.
6. The show committee may combine or divide classes if the number of entries warrants it.
7. Correct varietal labeling is mandatory in the Open. It is recommended on the Novice classes, but no entry shall be disqualified for failure to identify.
8. Standard containers will be furnished by the show committee and must be in all classes.
9. The American Peony Society Handbook will govern bloom types and color.
10. Anemone type such as Gay Paree shall be shown as Japanese.
11. Awards need not be given to unworthy exhibits.
12. The decision of the judges is final.

DIVISION I Open to all exhibitors

One bloom separate containers in classes A. B. C.

Class A. *Ten varieties, any type or color.*

B. *Ten varieties, herbaceous hybrid, any type or color.*

C. *Five varieties, Tree peonies, only any type or color.*

ONE BLOOM, LACTIFLORA ONLY, UNLESS OTHERWISE STATED.

D. *Double white or blush*

E. *Double light pink*

F. *Double dark pink*

G. *Double red.*

H. *Semi-double, any color*

G. *Bomb, any color.*

H. *Japanese any color*

I. *Single any color*

J. *Hybrid red*

K. *Hybrid pink*

L. *Hybrid white*

or cream

THREE BLOOMS, ONE VARIETY, LACTIFLORA ONLY, UNLESS OTHERWISE STATED, IN ONE CONTAINER.

DD. *Double white or blush*

EE. *Double light pink*

FF. *Double dark pink*

GG. *Double red.*

HH. *Semi-double, any color*

II. *Bomb, any color*

JJ. *Japanese, any color*

KK. *Single, any color*

LL. *Hybrid red*

MM. *Hybrid pink*

NN. *Hybrid white or cream*

ONE BLOOM TREE PEONY ONLY

R. *Japanese or Mouton white*

S. *Japanese or Mouton pink*

T. *Japanese or Mouton red*

U. *Japanese or Mouton violet*

V. *European or Lutea Hybrid white*

W. *European or Lutea Hybrid pink*

X. *European or Lutea Hybrid red.*

Y. *European or Lutea Hybrid yellow*

Z. *European or Lutea hybrid blend or bicolor*

DIVISION II Novice

Open to all amateur gardeners that grow peonies for pleasure and have never exhibited. Labeling of varieties desirable but not required.

Class

50. *Five varieties, one bloom in separate container, any type or color.*

ONE BLOOM, LACTIFLORA UNLESS OTHERWISE STATED

- | | |
|--------------------------------------|-------------------------------|
| 51. <i>Double white or blush</i> | 56. <i>Japanese any color</i> |
| 52. <i>Double light or dark pink</i> | 57. <i>Single, any color</i> |
| 53. <i>Double red</i> | 58. <i>Hybrid, any color</i> |
| 54. <i>Semi-double, any color</i> | 59. <i>Tree, any color.</i> |
| 55. <i>Bomb any color</i> | |

THREE BLOOMS, ONE VARIETY IN A CONTAINER

- | | |
|-----------------------------------|-------------------------------|
| 60. <i>Double, any color</i> | 63. <i>Single, any color.</i> |
| 61. <i>Semi-double, any color</i> | 64. <i>Hybrid, any color</i> |
| 62. <i>Japanese, any color</i> | |

COURT OF HONOR

The court of honor will be composed of the following best bloom.

- | | |
|--------------------------------|------------------------------|
| <i>Double — White or blush</i> | <i>Single</i> |
| <i>Double — Light pink</i> | <i>Red hybrid</i> |
| <i>Double — dark pink</i> | <i>White or cream hybrid</i> |
| <i>Double red</i> | <i>Pink hybrid</i> |
| <i>Semi-double</i> | <i>Tree</i> |
| <i>Japanese</i> | |

ARTISTIC DESIGN

America's 200 years. 1776-1976

1. SPIRIT OF '76
2. GEORGE WASHINGTON — THE COLONIAL DAYS
3. ABRAHAM LINCOLN — LET FREEDOM RING
4. COLUMBIA, THE GEM OF THE OCEAN
5. AMERICA, THE BEAUTIFUL — WITH AMBER WAVES OF GRAIN.
6. COLONIAL ARRANGEMENT FOR 1976
- ** HOLIDAY FESTIVITIES — TABLE ARRANGEMENT — INVITATIONAL

Junior Section

1. SAY IT WITH PEONIES
2. KITCHEN BOUQUET, FEATURING PEONIES

ARTISTIC DIVISION RULES

1. An exhibitor may make only one entry per class. All must be the work of the exhibitor.
2. Peonies must be the dominant flower. Peonies need not be grown by the exhibitor, and some will be available from the committee.

3. Other flowers, foliage, grasses and accessories are permitted in all classes.
4. Artificial plant material is not permitted.
5. Entries may be placed from 8:00 p. m., Friday, June 4, until 11:00 a. m., Saturday, June 5.
6. While the show management will exercise due caution in safeguarding exhibits, it cannot assume responsibility for injury or loss.
7. Personally owned properties must be claimed immediately after the show closes at 6:00 p. m., Sunday, June 6.
8. Qualified judges will be used in the Artistic Division.
9. The decision of the judges is final.

LEMOINE, THE HORTICULTURIST, HIS CONTRIBUTION TO THE PEONY

One hundred and fifty-two years have passed since the great Horticulturist, Victor Lemoine was born in Delme France, Oct. 21, 1823. The accomplishments in his life time of 88 years were monumental, in that his contributions to Horticulture are in every garden where plants are cultivated today.

He produced the unusual, improving and introducing plants of different varieties. He gave to the world the first double lilac. Varieties such as **Madam Lemoine** double white, **Miss Ellen Willmott**, large clustered late white, a double azure mauve which he named **Victor Lemoine**, also single varieties that are recognized for their outstanding beauty.

The first double **Tuberous Begonia** was produced by him in 1874. His work is the forerunner of the most profuse flowering types of begonias. The popular phlox reflects his work. Many varieties were produced by him. He changed the old fashioned (Mock Orange) **Syringa**, increasing the size. Tall plants, semi-double, very fragrant. Also a race of hybrids called **Lemoinei** were produced. Lemoine exhibited a new strain of **Gladiolus** in 1878, known as the **Lemoinei** hybrids. He was not satisfied with these bell-shaped flowers, and in 1889 he introduced varieties which were glorious in color and more open. This strain served as the bases for most of our modern varieties. The beautiful **Martha Washington** (geranium) **Pelargoniums** are the results of Lemoines work. The first double geranium is of his production. In 1852 he produced the double portulaca and in 1854 he produced the double **Potentella**.

The best of **Weigelias** are from the hand of Lemoine. Varieties that are suited for all gardens, some early, others quite hardy, with

bell shaped flowers of exquisite beauty. These plants are grown all over the world.

Lemoine's contribution to peonies has been one of great recognition. Many are grown in the gardens of today. To name a few—

Alesia (1927) White

Mont Blanc (1899) White with cream center.

Solange (1907) Creamy to buff and pale salmon pink.

Le Cygne (1907) Creamy white.

Primevere (1907) Creamy white, center canary yellow.

Lemaine crossed PAEONIA LUTEA with the double Chinese cultivars of tree peony SUFFRUTICOSA producing varieties: **Alice Harding**, **Chromatella**, **'L' Esperance**, **La Lorraine**, **Flambeau** and **Satin Rouge**, all of which have yellow or red and yellow flowers.

The outstanding development of a few years ago of the Itoh Hybrids by Mr. Poichi Itoh, who was a floriculturist in Japan, has renewed our hopes of eventually achieving a strain of yellow herbaceous peonies based on *P. lactiflora*. These hybrids resulted when pollen of the Lemoine Lutea Hybrid **Alice Harding** was used on flowers of **Kakoden**, a semidouble *P. lactiflora*. Bulletin #209 P. 41. Nothing further has been reported on the origin of **Kakoden**. However, we have from THE PEONIES (p. 171) that Lemoine used pollen of *P. suffruticosa* Yaso-okima to produce **Alice Harding**. Thus we are in possession of something that is all too often missing in the recorded history of peonies, a family tree.

Through the works of Lemoine and the results that followed, an entirely new direction of peony breeding effort has arisen which has as its bases the accomplishments of a previous hybridizing program.

Victor Lemoine was honored by Horticultural Societies in all parts of the world. He died in Nancy France, Oct. 11, 1911. He gave, he worked and died among his flowers. His contribution to horticulture lives on. His name is indelibly written in peony history.

* * * * *

Mr. William Krekler has donated F. C. Sterns book, "A Study of the Genus Paeonia" to the American Peony Society, also the book, "The Paeonia" by Roy Genders published in London England, 1961.

* * * * *

The Fifth District has given a Memorial to the American Peony Society, in memory of Mr. Kenneth Sampson, a Past President of the District. This memorial will be used toward the publication of the check list of peonies.

CULTURE OF PAEONIA EMBRYOS BY IN VITRO TECHNIQUES

by *Martin M. Meyer, Jr.*

University of Illinois at Urbana-Champaign



*Prof. Martin Meyer
University of Illinois
at Urbana-Champaign*

The germination of embryos in test tubes on a defined medium is one of the oldest techniques of *in vitro* culture of plants. This technique has been practiced since the early 1900's with orchids (see this Bulletin 215:24). The germination of peony seeds is a complex process because of the condition of epicotyl dormancy of the embryo. The seeds under warm moist conditions undergo a period of root development. However, the epicotyl or shoot portion of the young seedling is dormant and the seedling must have a period of moist chilling before it will grow at warm growing temperatures. The embryos of peony seeds also seem immature as the embryo constitutes only a small fraction of total seed weight. A large portion of the peony seed is endosperm or food storage tissue which is needed to develop the young embryo. These factors result in a considerable delay from planting until germination is complete with the plants showing above ground.

Procedures were completed to extract and successfully culture peony embryos by *in vitro* techniques to speed up the germination of these seeds. Seed was obtained from the University of Illinois peony gardens from open pollinated flowers of Sea Shell, Lois Kelsey and several other herbaceous varieties. Mr. P. C. Laning of Kalamazoo, MI donated the tree peony seed.

The procedure for extracting peony embryos seemed as easy as any seed I have attempted. Simple tools were needed as seen in Fig. 1. The seed was thoroughly washed to remove any dirt or other contaminating material. Very dirty seed should be washed and soaked in 10% Chlorox (1 part - 9 parts water) for 15-20 minutes before the next step. The embryo half of the seed, which is easily distinguished by a slight protuberance, was removed by the wire stripping tool (Fig. 1). The endosperm containing the embryo was then removed from the seed coat (Fig. 2) and soaked for 20

minutes in 10% Chlorox. The tools for further extraction were sterilized by either rubbing alcohol or 10% Chlorox. The tools were dipped in 1% Chlorox between seeds and the extraction was done under sterile conditions (see this Bulletin 216:31). The endosperm halves are further reduced by slicing with a scalpel or sharp knife on either side of the embryo containing protuberance. The embryo is exposed by grasping the remaining endosperm with forceps on either side of the embryo and bending the endosperm until it cracks exposing the embryo (Fig. 3). The exposed embryo is easily removed using a slightly sharpened flat wire or dental probe. If the endosperm does not break cleanly at the embryo as sometimes happens, the embryo can be carefully dug out using the probe. A magnifying glass might be appropriate at this stage, although with good eyes and a little experience it is not needed.

The extracted embryo was placed on the surface of an agar medium in test tubes. Knop's, Knudson's and Linsmaier and Skoog's (LS)¹ media were used in these embryo culture studies. Knop's and Knudson's were chosen because they are simple, containing inorganic elements, sucrose (table sugar) and agar. However, neither of these media produced very good growth as compared to the LS medium (Fig. 3). The embryos in Knudson's medium enlarged very little. Although there was some enlargement of the embryos in Knop's medium, it was not consistent. The LS medium was clearly superior and seemed quite consistent for all the varieties tested. Further tests are needed to determine which components of this complex medium are the necessary ones.

The test tubes containing embryos on the media were placed in an 80°F room under cool white fluorescent lights at 300 foot candles (3,000 luxes). The embryos enlarge rapidly, and the hypocotyl root axis grows rapidly. In two months many of the embryos were three or four inches in length. Several of the embryos were then placed in a 35°F cooler for twenty-eight to fifty-six days. These chilled embryos were then returned to the light racks. The 28 day cool storage treatments started growing true leaves immediately after returning to the light rack. Figure 5 shows an embryo stored for 35 days in the cooler after root development and returned

¹ Modified medium from Linsmaier, E. M. and F. Skoog. 1965. Organic growth factor requirements of tobacco tissue cultures. *Physiologia Plantarum* 18:100-127. This is also similar to the MS high salt medium (*see this Bulletin 216:29) with the following chemicals in milligrams per liter, NH₄NO₃ - 1650, KNO₃ - 1900, CaCl₂ 2H₂O - 440, MgSO₄ 7H₂O - 370, KH₂PO₄ - 170, Inositol - 100, Iron chelate - 42, Thiamine HCl - 0.4. *Minor element stock one milliliter per liter, following chemicals in grams per liter sucrose (table sugar) - 40, Agar - 6. The pH can be adjusted to 5.6 by adding sodium or potassium bicarbonate at 10-11 milligrams per liter, but this may depend on the distilled water available.

to the lights compared to an embryo left under the lights. Normally, embryos have little or no dormancy when grown by *in vitro* techniques. Peony embryos apparently maintain epicotyl dormancy *in vitro*, but the dormancy is easily overcome by 30-40 days at 35°F after the cotyledons and roots have developed. The plants then send up true leaves.

The young plants are capable of being transplanted when the first true leaves of the embryo have expanded. If the plants are left too long in the test tubes, they do not transplant well. The plants are easily pulled from tube and the small amount of medium adhering to the plants is easily washed off. The plants are potted in a container deep enough to accept the roots which may be 3 to 4 inches in length. The soil mixture used should be heavily amended to insure proper drainage in small containers. A mixture of 60% coarse sand, 20% loam soil and 20% peat moss works well and makes potting easy. The soil should be as clean and weed free as possible and, if possible, should be sterilized. A sterile potting soil can be purchased and can be amended with extra sand. Figure 6 shows a herbaceous peony embryo germinated *in vitro* and then grown in a pot for several weeks.

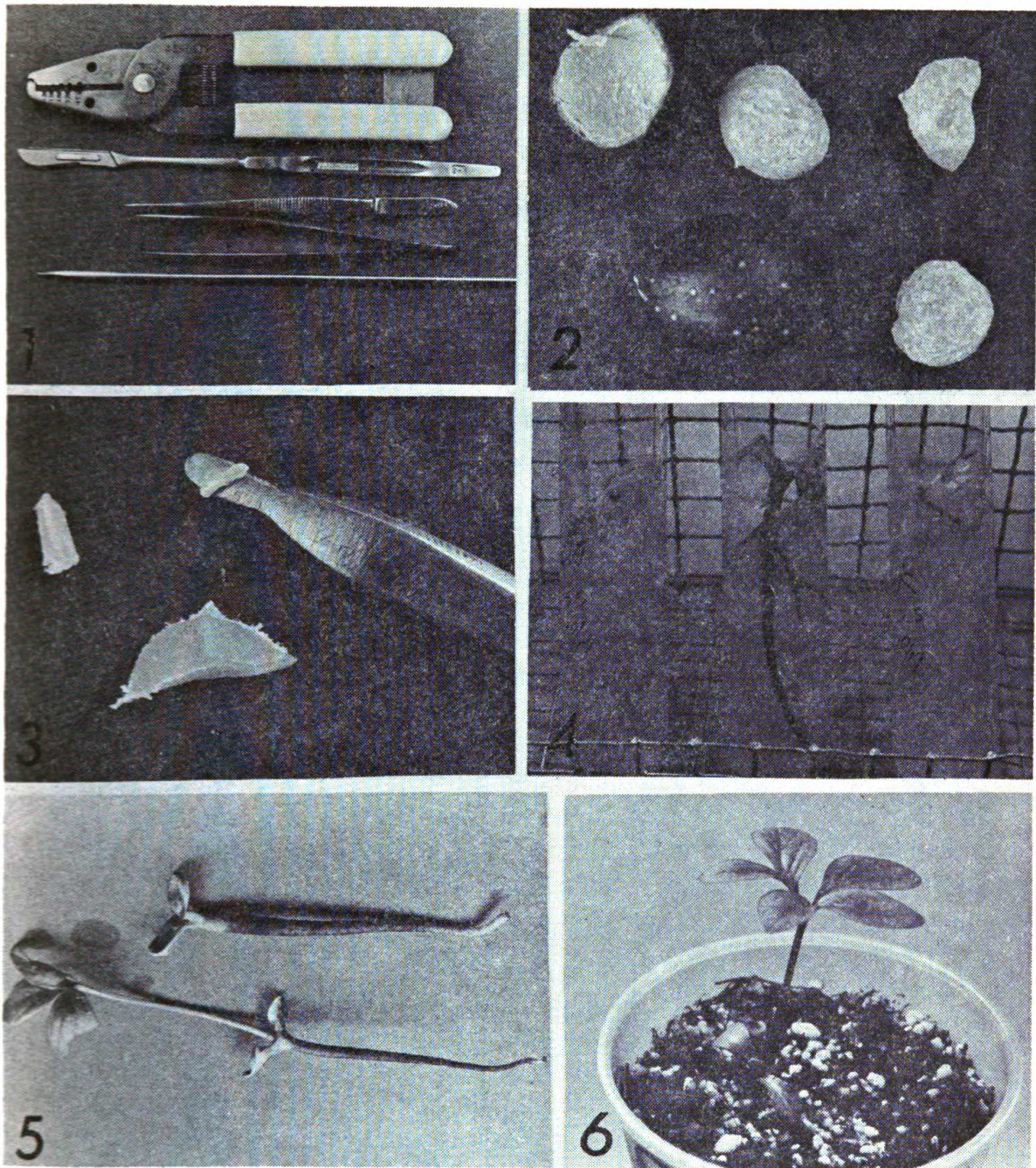
The herbaceous peony embryos seem more easily cultured *in vitro* than the tree peony embryos. I extracted 90 good embryos out of 100 seeds of open pollinated Sea Shell flowers and 65 of these appear to be capable of growing as plants. The tree peony embryos were more difficult to extract and 80 embryos out of 100 seed is a good return on these. The first herbaceous peony embryos were extracted and cultured August 22, 1975. They were transferred to the cold room October 10 and removed to the light November 7. These were completely germinated by December 1.

The above techniques show a relatively simple method of culturing peony embryos *in vitro*. The members of the society may not be able to culture these as easily as the orchid seeds recommended earlier (Bul. 216:31), but with care these techniques should not prove too difficult to master. Germination will certainly be faster than normal and possibly weaker seed may germinate better as the endosperm food storage is replaced by a defined medium. Further work on better media for embryo culture and the transplanting and growth of young peony seedlings after culture is definitely needed.

FIGURES

Fig. 1. *Tools for peony embryo extraction in order of use.*

Fig. 2. *Peony seed; embryo half of seed coat, endosperm halves end and side view (upper row respectively).*



- Fig. 3. Peony embryo in cut endosperm (lower), endosperm broken to reveal embryo and embryo on the probe (2X enlargement).
- Fig. 4. Peony embryos after two months in the light at 80°F (from the left) Knudson's orchid agar, Linsmaier-Skoog, and Knop's media (1/2X).
- Fig. 5. Peony embryo 16 weeks at 80°F in the light (upper); peony embryo 7 weeks at 80°F, 5 weeks at 35°F and then 4 weeks at 80°F in the light (1/2X).
- Fig. 6. Peony seedling grown from embryo in vitro with warm and cold treatment and transplanted to a growing medium in a pot for 3 weeks.

THE SAUNDERS LOBATA OF PERRY HYBRIDS: A DOCUMENTATION

By Don Hollingsworth

"Thus from 25 crosses on KELWAY'S GLORIOUS, I have 7 in propagation, 3 of them named. Moral: Use only the best for crossing on. . . ." A. P. Saunders, quoted by E. L. (Roy) Pehrson in December 1975 *Paeonia*.

Professor A. P. Saunders, Ph.D., recorded this insight in one of his notebooks perhaps 40 years ago. It appears among some notations referring to the production of a most distinguished family of peonies, the **Saunders Lobata of Perry Hybrids**.

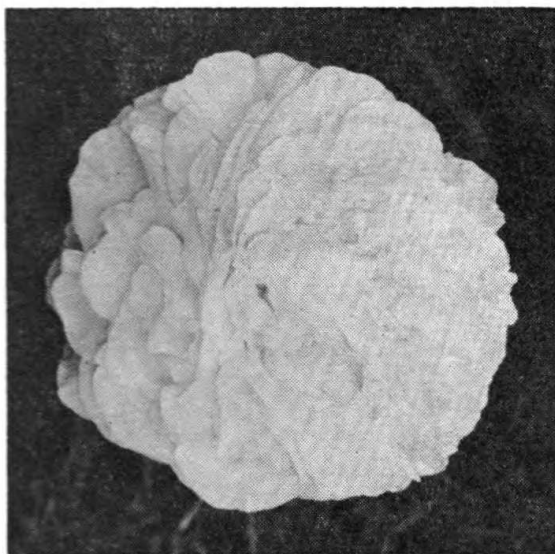
According to published accounts, crosses were made in 1929 and 1931 between a plant which was received as *Paeonia lobata* from Amos Perry of England and plants of the Chinese peonies (*P. lactiflora*). A large number of pollinations were made and seed production was unexpectedly good. Eventually 1,609 progeny of these crosses were given numbers in the Saunders notebooks. Of these, 36 are known to have been named and introduced into the plant trade by the Saunders nursery. Dr. Earle B. White also made the cross, of which one was introduced by the Gilbert Wild and Son nursery. The plants are distinguished among herbaceous peonies for horticultural purposes because of their unusual flower colors, but offer much more value than this in their potential for breeding additional new cultivars. This fact is made especially so because there are so many of them for which the identity of their *P. lactiflora* parent and other selection criteria are known.

Professor Saunders kept meticulous records of his breeding trials and results, preserving a great deal of pedigree information. During his lifetime his work was extensively reported in published accounts which are available to us in libraries and private collections. He also left his private records in such condition and circumstances that certain important parts of them have been made available for our use even now. For this we are especially indebted to his daughter, Silvia Saunders, and to E. L. (Roy) Pehrson, who has been Mentor to most of us who have recently become involved in peony breeding.

In the above quoted passage Professor Saunders echoed a tradition which has long guided breeders. That is, "breed the best to the best," which derives from the companion saying, "like begets like." Along with advent of the practical application of genetic science principles in plant and animal breeding came the expanded realization that "like begets like and that of previous ancestry." Thus the rise in recognition of the importance of knowing something of ancestry when selecting breeding plants.

The chief purpose of this article is to have published what is now available to us about the original Saunders Lobata of Perry Hybrids. For convenience, I will sometimes use the abbreviations SLP or SLP Hybrids.

Experience to date suggests that the SLP Hybrids contain a large, untapped potential for producing fine progeny. For example, PRAIRIE MOON (pictured on the cover of *APT Bulletin* 212, December 1974) has been attributed by Orville Fay to a mating of LAURA MAGNUSON X the Marco Hybrid ARCHANGEL. BRAVURA is reported by Mr. Fay to be the pod parent of both PAULA



FAY and BLAZE. Roy Pehrson's LULLABY, pictured here, is from MOON OF NIPPON X LAURA MAGNUSON. In addition, two second generation plants for which pedigrees were not retained have been introduced by the Saunders nursery. These are the well-known MOONRISE and the rather rare RED LACQUER. While these tend to establish the breeding potential of the family, it is seen that the actual possibilities are largely untested..

In the tabulation which appears below, I have meant to retain the information not previously published which may be especially helpful to hybridists. Since the historical account of how this peony family originated already appears in several published sources, such information has been given a lower priority here. Data has been drawn primarily from three basic sources. Except as otherwise noted, the pedigree information comes from Professor Saunders' own records, by way of one of his notebooks that is in the custody of Roy Pehrson. Mr. Pehrson originally tabulated the basic list of sibling groups and it has been published in the hybridists newsletter *Paeonia*. Since that time he has kindly prepared photocopies of the relevant pages of the Saunders' notebook for my use. Descriptive detail on the hybrids has been partly drawn from a checklist of introduced hybrid peonies published with the byline of George W. Peyton in the *APS Bulletin* 129, June 1953, as augmented by direct observation and comparison of descriptions in recent lists of plants offered for sale. The Peyton list is attributed to work which was done in preparation for publication of *Handbook of the Peony* (G. W. Peyton, ed., 1953). Descriptive information on the named *P. lactiflora* cultivars has come from *Peonies: The Manual of*

the American Peony Society (James Boyd, ed., 1928).

**Introduced Peony Cultivars Produced in the First Generation
by the Hybrid Mating: *Paeonia lactiflora* cvs X *Paeonia* Species LO-
BATA (PERRY),**

Tabulated by Sibling Group With Description

Legend: The *P. lactiflora* parent is given on the first line of each entry; it is the pod parent unless the reverse cross is specified. Introduced seedling names are indent listed following. Where the information is available, the name entries are followed by: Breeder/introducer and year; flower type; color description; and, on the parent line, number of seedlings grown of the cross. Flower type abbreviations: D=double; SD=semi-double; S=single. Hybrid progeny bred by A. P. Saunders except as otherwise noted.

ADOLPHE ROUSSEAU (Dessert & Mechin, 1890.) D, red; 5 grown.

Named: LUSTROUS (1942.) SD, vermilion scarlet.

RED RED ROSE (1942.) SD, satin scarlet.

JAMES KELWAY (Kelway, 1900.) D, pale pink; 22 grown.

Named: NATHALIE (1939.) SD, light rose.

KELWAY'S GLORIOUS (Kelway, 1909.) D, white; 25 grown.

Named: CARINA (1944.) SD, scarlet crimson.

ELLEN COWLEY (1940.) SD, cherry pink.

LAURA MAGNUSON (1941.) SD, light coral, large.

SOPHIE (1940.) S-SD, cherry.

**LADY ALEXANDRA DUFF (Kelway, 1902.) D, blush. Reverse,
3 grown.**

Named: JEANETTE (1938.) S, salmon pink.

MARIE CROUSSE (Crousse, 1892.) D, pale pink.

**Named: TECUMESH (White-Wild and Son, 1958.) S, bright cherry
red. Bred by Dr. Earle B. White, pedigree source the
GIST LIST.**

MARIE JACQUIN (Verdier.) SD, pale pink, fades white; 23 grown.

Named: ALEXANDER WOOLLCOTT (1941.) SD, crimson.

CONSTANCE SPRY (1941.) SD, cherry pink.

NADIA (1941.) SD, cherry pink.

**PRIMEVERE (Lemoine, 1907.) Anemone, white, yellowish center;
188 grown.**

Named: FORTUNE (1943.) S, bright rose.

LOVELY ROSE (1942.) S, creamy pink.

ROSE DIAMOND (1943.) S, salmon rose.

VENUS (Kelway, 1888.) D, pale, old rose pink; 66 grown.

Named ROSE TULIP (1947.) S, deep rose, tall.

SAUNDERS 441. 214 grown.
 Named: CLAUDIA (1944.) S, coral pink, tall.
 SKYLARK (1942.) S, rose pink, tall.

SAUNDERS 1302. 67 grown.
 Named: CORALIE (1940.) S, coral, tall.

SAUNDERS 1833. 36 grown.
 Named: RED COCKADE (1943.) S, bright crimson.

SAUNDERS 1875. D, white with stamens (LADY ALEXANDRA
 DUFF X HOGIOKU) source Silvia Saunders. 58 grown.
 Named: CYTHEREA (1953.) SD, cherry rose.
 JEAN COWLEY (1942.) SD, bright rose.
 LUDOVICA (1941.) SD, rose pink.
 PALADIN (1950.) SD, carmine red, short.

SAUNDERS 1952. 60 grown
 Named: GREAT LADY (1940.) S, cool rose, tall.
 OLIVIA SAUNDERS (1943.) S, pale pink.

SAUNDERS 2011. 115 grown
 Named: ALERT (1941.) S, crimson.
 BRAVURA (1943.) S, light crimson.
 CARDINAL'S ROBE (1940.) S, scarlet.

SAUNDERS 2402. 96 grown.
 Named: GILLIAN (1950.) S, pale salmon pink.
 GRACE ROOT (1940.) S, salmon pink.

SAUNDERS 2449. 23 grown.
 Named: ALISON (1952-1955.) S, pink.

SAUNDERS 2529. 21 grown.
 Named: CECELIA (1940.) S, rose pink, flared.

SAUNDERS 2634. 15 grown.
 Named: JULIA GRANT (1939.) SD, clear pink.
 QUEEN ROSE (1949.) S, rose pink shaded formerly
 MASTERPIECE.

SAUNDERS 3500. 18 grown.
 Named: ELIZABETH FOSTER (1941.) S, large brilliant pink.

UNIDENTIFIED SEEDLING. S, the reverse cross, 21 grown.
 Named: ROSE GARLAND (1943.) S, China pink.

SUMMARY

BRED BY A. P. SAUNDERS

LOBATA (PERRY) as pollen parent:
 17 matings, 1,052 grown, 34 introduced.
 19 matings, 533 grown, none introduced

LOBATA (PERRY) as pod parent:
2 matings, 24 grown, 2 introduced.

TOTALS:
38 matings, 1,609 grown, 36 introduced.

BRED BY EARLE B. WHITE
1 introduced.

Other Saunders Lobata Hybrids. Documentation of the SLP Hybrids will not be sufficient without identifying some other hybrids frequently lumped with them under the general heading "Saunders Lobata Hybrids." Three fine named hybrids are from Saunders 5267 LOBATA, SEEDLING. These are HERTIAGE, MONTEZUMA and YOUR MAJESTY. According to the record, they were selected from 397 numbered seedlings of the cross. JANICE, another fine hybrid, is annotated in the record as follows, "Parentage unknown, but obviously a lobata hybrid."

This completes the record of named hybrids which are identified in Professor Saunders' "Big Notebook" as being of *P. lobata* parentage, according to Mr. Pehrson. However, other Saunders peonies of these and other *P. lobata* crosses may very likely be in the plant trade, and may have been introduced under names given to them by other persons. For example, seedlings were recorded in the Saunders notebook from hybrid crosses of several *P. lobata* other than those covered above, but none are shown as having been named, according to Mr. Pehrson. However, I recently ran across a statement by Mr. Peyton which cited William H. Krekler's introduction, HELEN MATTHEWS, as one of a "large number of hybrid seedlings that Mr. Krekler received from Dr. A. P. Saunders, none under number and none having bloomed, so we do not know its parentage." (APS Bulletin 150, Sept. 1958, p. 57.)

There are other recorded instances of the distribution of unnamed seedlings from the Saunders nursery. According to annual lists I have for the final 5 seasons or so of the Saunders nursery operation, Miss Silvia Saunders regularly offered a collection described thusly: "Unnamed; by color only. Those whose names are lost, or which are unnamed because too similar to named ones." Also, I have correspondence from Mrs. Peggy Goldsmith of the Goldsmith nursery, Edmunds, Washington, in which she states that in addition to the nursery's listing of named peony hybrids, they offer divisions of "about 100 plants from Professor Saunders' lobata seedlings." However, insofar as I know, the identities of such plants with the Saunders' records are now lost. Therefore, until actually

tried as breeders, they present no greater selection opportunity for hybridists than do any other comparable peony cultivars for which information about ancestors is not available.

From the standpoint of breeding capability, the SLP Hybrids listed above are generally more rewarding in the production of progeny than are any other species of hybrids having *P. lactiflora* as one of the parents. Their pollen typically has a fairly useable level of fertility, making it relatively easy to backcross them to the *P. lactiflora* parent. When SLP flowers are pollinated with pollen from other members of the same group or that from many of the currently available advanced generation hybrids, an occasional seed is produced. Though few in number, these seeds usually germinate rather well when the pollen parent is of somewhat related origin. If double flowered progeny are desired, I believe that preference should be given to SLP pollen varieties having a full double *P. lactiflora* parent and which exhibit a semi-double form themselves (SD seems to be the maximum extension of doubling so far observed in either the first or second generation SLP Hybrids.)

NOTES RELATING TO THE HISTORY, DISTRIBUTION, AND CULTIVATION OF THE PEONY IN CHINA AND JAPAN

*Translated from Original Chinese Works, into Dutch,
by D. I. Hoffman, of Leyden; and again translated from the Dutch,
by Mr. Polman Mooy, of Haarlem.*

Reprinted in four parts from PAXTON'S MAGAZINE
OF BOTANY, Vol. 16, 1849.

Submitted by Don Hollingsworth

(continued from BULLETIN # 216, Page 39)

Part III

Editorial Note.

In 1840, a German scientist, Justus von Liebig, had published his balance sheet of plant nutrition, "The crops on a field diminish or increase in exact proportion to the diminution or increase of the mineral substances conveyed to it as Manure" (U.S.D.A., SOILS. THE 1957 YEARBOOK OF AGRICULTURE, P. 3.) "Manure" as a word in the English language was then used more broadly than it is today. Whereas it is now used most often in reference to animal waste, it covered most any amendment meant to improve the soil for growing plants.

Prospects for a new science of soil fertility and plant nutrition

were under way in the Western World when Hoffman was working at his translations of ancient Chinese and Japanese plant books. We can only guess that he was keenly interested in these matters pertaining to "Manuring" but probable accuracy of the guess is supported by the frequency of items on that topic which he chose to include in the finished work. We might wish he had been more thorough in helping us to understand some of the other cultural manipulations which he reports.

—Don Hollingsworth

TREATISE ON THE CULTIVATION OF THE PEONY AFTER JAPANESE GARDENERS' MANUALS AND VARIOUS OTHER WORKS.

The Preparation of the Bed.—In preparing the Paeony bed, the nature of the soil as to its moisture and drainage ought to be a point of particular consideration. It ought to be observed that this plant prefers a cold climate, and extremely dislikes any degree of heat. A rather dry soil proves beneficial to its growth, and it cannot resist any superfluous moisture, which particularly proves destructive to the red-blooming sorts; for the plant, when once with rot about the roots, not seldom suddenly dies away. Nothing so much improves the vigor of its growth as a supply of fresh and well-manured soil, and a place situated towards the south should be chosen for the bed, such that a covering may conveniently be constructed to protect the plants against the heat of a burning sun, from which they soon suffer.* The bed, when made three to four feet broad, will allow sufficient space to plant two rows of middling-sized plants. Should the plants, however, be of extra large size, the bed must, of course, be made accordingly.†

The bed should be made half-a-foot elevated above the surrounding path, which is a rule of the greatest importance, particularly so in badly drained places; (in very wet places, Ito Ifeif advises the bed to be made at an elevation of one foot). Around the bed a low frame of small bricks must be constructed to fasten the covering upon, which might also be made of wood, but for that purpose chestnut wood should be avoided. From a bed after the above description, the old soil should be dug out, and again filled with a mixture of black peat, well-rotten leaf-mould, and common garden soil, in equal proportions, which should be sifted and thoroughly mixed through. When afterwards the plants are transplanted, a fifth part of ashes from burned straw should be added thereto. A mixture consisting of soil dug from the surface of an orchard, sand, and common garden mould is also considered to make a good compost.

The Planting and Transplanting.—The improved Paeony should

be often (once a year) transplanted, for if this be neglected, in the sixth or seventh season a stoppage of bloom will be inevitable. (It will easily be observed that the word "planting," made use of here, means what we should call, "changing the soil.") The time preferred for transplanting them, is the last day previous to the autumnal equinox, or the day following. Should the weather, however, prove hot, it may be done a few days later. In transplanting, the old soil should entirely be removed, and the new soil (which should previously be prepared for the purpose) should be applied. The Japanese peasantry give to such performance the name of *tsoetsi-gari*, "change of soil." Particular care should be taken not to injure in any way the young and tender fibres; and, after planting, the soil should not be pressed down with the feet, as practised with other plants, but should be left quite loose around the plants.

About the annual transplanting of the improved Paeony, known by the name of *Botanno newake*, "division of the roots," we find in the "Japanese Encyclopedia," tom. 93, p. 6, and also in the "Japanese Imperial Almanac," "*Gwats rei fak buts zen*," publication of 1804, tom. 8, p. 29, stated that this performance belongs to the operations of the 8th month (September).[§] This prescript is as follows:—Take a quantity of river-bog, which, after being dried, should be thoroughly sifted, together with a quantity of old garden-soil and silver-sand, in equal proportions. In the 8th to the 10th month (7th Sept. to 6th Nov.), after the plant has formed its red buds, it should be planted in the above-described mixture; the use of animal matter as manure has proved to be injurious. In winter-time a quantity of rape-seeds, from which the oil has been pressed out, may be deposited about the roots; also a sprinkling with water in which fresh sweet-water fish has been washed, is considered beneficial to its growth. The *Aki botan*, or improved Autumnal Paeonies, are (as stated in the above-named "Almanac," tom. iv., p. 30, planted or transplanted during the 4th month (May), and are watered every night, as are also the following plants, viz.:—

Acorus gramineus. Jap. *Seki sjo bu*.

Eryobotrya japonica, Sieb. et Zucc. Jap. *Biwa*.

Begonia grandis, Ougaud. Jap. *Siu kai dô*.

Olea fragrans. Jap. *Katsura*.

* This statement taken from a Chinese work, *Hwapoo*, is also found in the Japanese Encyclopedia."

† "*Kwa dan dai zen*," or "Treatise upon the Cultivation of Flowers," by the florist Kwakiuken Sjuzin Miyako, 1756, publication of 1788.

‡ A description of the Japanese ornamental plants and their cultivation, entitled "*Tsi kin seô*" or the "Earth's Attire," illustrated by Ito Ifei, *Ifortulanus* at Jeddo, published in 1710—1719, 20 volumes in 12mo, tom. vi., p. 10.

§ The day of Autumnal Equinox is a rest and holiday in Japan.

¶ In the work before referred to.

And the different sorts of Acer, **Karede**, and of Chrysanthemum Indicum, **Kikr**.

Ito Ifei || advises the Paeony-growers at Jeddo to manure with a mixture of black and red soil in equal portions, with a little sand. He states that, in transplanting, every kind of dirt used as manure; which, being deposited around the roots, gives a favourable result; also the ashes from burned fowl-dung, when buried underground for three months, and then deposited around the roots in small quantities, proves excellent. Dirt, not well-rotten, liquid manure, and urine, he disapproves of, particularly for red-blooming sorts, as the evaporation of salt, which originates therefrom, makes the flowers discolour.

Cleaning of the Plants—It is the custom in Japan to clean the stems of the plants after the leaves have dropped, and when the rainy season commences, the moss, being apt to settle along the stems, is removed by the use of some kind of spoon made of willow-wood; such being done, the stem is neatly rubbed with a piece of linen containing well-bruised Camellia-fruit, in order that the oily matter therefrom, penetrating the linen, may give a glistening appearance to the outer skin. During this performance, care should be taken not to move the roots about; and it should not be often repeated, as such might injure the plant.

The Winter-covering.—The beds where Paeonies are planted, are covered with stable-straw or horsedung, to protect the roots against the severity of the season, and the stems are covered with mats; both protections should, however, be removed at the commencement of the 2nd month before the mildness of the season sets in. Ito Ifei also advises to cover the bed with horsedung, but disapproves of the covering with mats, which he states, often causes the stem to wither in the spring following; or weakens the flower-buds so much that they easily drop off.

The Rain and Sun-covering.—The custom to cover the Paeony flowers with an oilpapered frame, has its harm as well as its advantage; it appears very advantageous to expose the flowers fully to the morning sun, and the cover should, at that time of day, be always removed; but again, it appears that the flowers suffer from the sun not bestowing its heat upon them quite pure, but always mixed with the evaporated oil-damp. Every individual amateur should take these two facts into consideration, and judge for himself which is to be preferred; it, at all events, is quite clear that all sort of covering is injurious, unless a longer duration of floral beauty be wished for. After the advice of Ito Ifei, the Peony bed

ought to be covered with straw mats during the blooming season, which should be replaced with light boards, in case rain falls. Oiled paper he at all times disapproves of.

The Winter-manuring.—Somewhat before or about the middle of winter (21st or 23rd of December), the soil is carefully dug out round about the roots, and a quantity of powder composed of sulphur and drupstone,* of equal portions, is strewed about them, and the roots are again covered with the old soil. This performance is said to produce a more perfect development of the flowers. According to Ito Ifei, the Paeony plants should be manured twice a year, and no more; for if over-manured, they get a sickly appearance, and the flower-buds rot and drop before they have attained sufficient power to develop.

Treatment of Sickly and Tender Plants.—Sickly and tender plants should have little or no manure, but should occasionally receive a sparing supply of rain-water, which must have been exposed to the heat of the sun previous to use, for twenty-four hours, and mixed with a little urine. All plants rather backward in growth should not be manured; but should be planted in a rather rich clay. Should the soil of itself prove already rich, it must be observed that no manure is wanted, neither should, in that case, any rape-seed be applied.

Removal of Vermin.—To protect the roots from the attack of worms, a powder from Pin lænt roots may be mixed with the soil; the holes which they leave behind should be filled up with sulphur, and should afterwards be shut up with pins made of Cypress wood. The rain-worm is easily removed by occasionally applying a little urine and water about the roots. If a worm has settled within the stem, the latter may be pierced on one side down to the center, when the worm can be destroyed by the use of a bamboo needle; the stem will, by so doing, be saved, and the wound thus made, will soon cure of itself. Some white-coloured insects sometimes stick in considerable quantity about the outer part of the stem, they may, however, be easily brushed off.

(To be continued)

* The drupstone from Satsuma is considered the best. The drupstone is a congealing of the stone-sweat, met with in grottos, from the upper part of which it hangs off like icicles.—The "Jap. Conversations Lexicon," "Fak buts zen," p. 314, under "Sjô niu seki."

† **Pih leen.** Jap. Bjakren ("Jap. Enc.") Nitis pentaphylla, Thunb.

PUBLICATIONS

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